CALIFORNIA
STD/HIV PREVENTION
TRAINING CENTER

California Guidelines for STD Screening and Treatment in Pregnancy:

Recommendations from the California STD/HIV Prevention Training Center and the California Department of Public Health STD Control Branch

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California Guidelines for STD Screening and Treatment in Pregnancy

Sexually transmitted diseases (STD) are common among women of childbearing age and may be asymptomatic. The goals of STD screening during pregnancy are: 1) early detection and treatment of infection; 2) to prevent maternal complications; 3) to prevent vertical transmission and neonatal disease. The Centers for Disease Control and Prevention (CDC) 2006 STD Treatment Guidelines recommend screening pregnant women for STDs. The CDC screening recommendations are incorporated into the recommendations below. Note that these are screening recommendations for asymptomatic pregnant women. Women presenting with signs or symptoms of STDs should be examined, tested and treated if an STD is suspected at any time during pregnancy. This document is limited to an overview of STD screening and treatment guidelines and does not address issues regarding diagnostic work-up, STD counseling and/or partner management. Treatment of HIV including prophylaxis for HIV positive pregnant women is beyond the scope of this document.

STD SCREENING RECOMMENDATIONS BY DISEASE

HIV

- Screen ALL PREGNANT WOMEN as early in the pregnancy as possible. Testing is voluntary but HIV information and testing should be offered to all pregnant women.
- Re-test in third trimester in high risk women (injection drug use, concurrent STDs, women with multiple sex partners or HIV-infected partners).
- Rapid HIV testing for women in labor if undocumented HIV status. If rapid test is positive, antiretroviral prophylaxis (with consent) prior to confirmatory test results.

Note: *California Health and Safety Code 125090 requires that the medical provider inform the pregnant women about their intent to perform HIV testing with a discussion of the tests' purpose, risks, benefits, treatment options if the women is HIV positive, information on perinatal transmission and treatment to reduce risk of perinatal transmission. The woman should be informed that she can decline testing and documentation of refusal of testing should entered into the women's medical record.*

SYPHILIS

- Screen ALL PREGNANT WOMEN at first prenatal visit with a non-treponemal test (VDRL or RPR), and if positive, confirm with treponemal test (TP-PA or FTA- ABS).
- Re-test at 28 to 32 weeks and at delivery for women living in areas with excess syphilis morbidity.
- Stat RPR should be done at delivery for women with no prenatal care.
- No infant or mother should leave the hospital without having the maternal syphilis status documented at least once during pregnancy.
- Any woman who delivers a stillborn after 20 weeks' gestation should be tested for syphilis.

Note: *If a treponemal EIA test is used for syphilis screening all positive tests should be confirmed by a non-treponemal test (RPR or VDRL). If the non-treponemal test is positive then syphilis is confirmed. If the non-treponemal test is negative a second treponemal test should be done. If this is positive then syphilis is confirmed, if this is negative then the first treponemal EIA was a false positive.*

Note: *Contact your local health department to find out about areas with excess syphilis morbidity where the risk for congenital syphilis is high.*

Note: *California Health and Safety Code 120675-120715 requires that a syphilis serology be done at the first prenatal visit.*

HEPATITIS B

- Screen ALL PREGNANT WOMEN in first trimester with hepatitis B surface antigen (HBsAg) in each pregnancy even if previously vaccinated or tested.
- Re-test at time of admission to hospital for delivery in unscreened women and high risk women (more than one sex partner prior 6 months, concurrent STDs, recent or current injection drug users [IDU] or HBsAg-positive partner).

Note: *Hepatitis B vaccine is safe in pregnancy. Women who are at risk for hepatitis B should be vaccinated. HBsAg serologic testing should be done prior to starting the hepatitis B vaccine as transient positive HBsAg tests can occur post vaccination.*

CHLAMYDIA

- Screen ALL PREGNANT WOMEN at first prenatal visit.
- Re-test in third trimester for at-risk women (ages 25 years or younger or who have new or multiple sex partners or if tested positive earlier in pregnancy).

Note: *Urine or patient obtained vaginal swab Nucleic Acid Amplification Tests (NAATs) for chlamydia have the advantage of being non-invasive and can be obtained when a pelvic exam is not being done or when there is a risk to the pregnancy in taking cervical specimens. Because NAATs are the most sensitive testing technology to detect chlamydial infection, they are recommended for screening.*

GONORRHEA

- Screen at first prenatal visit for women ages 25 years or younger or women at risk (history of gonorrhea in prior 2 years, more than one sex partner in past year, partner with other partners, commercial sex work and drug use) or women living in an area with high gonorrhea prevalence (certain geographic regions). African American women are also at higher risk for gonorrhea.
- Re-test in third trimester for women at continued risk or if tested positive earlier in pregnancy

Note: *Urine or vaginal swab NAATs for gonorrhea have the advantage of being non-invasive and can be obtained when a pelvic exam is not being done or when there is a risk to the pregnancy in taking cervical specimens.*

HEPATITIS C

- Screen at first prenatal visit in high risk women (history of IDU, history of blood transfusion or organ transplantation before 1992).

BACTERIAL VAGINOSIS

- Screen women with a history of preterm labor and delivery at first prenatal visit.
- Benefit of screening women at low risk for preterm labor is unproven.

HUMAN PAPILLOMAVIRUS

- No recommendation for routine HPV screening apart from work-up of abnormal Pap tests.
- If the patient has not had a Pap in the past year, it may be warranted to obtain a Pap test for cervical disease at the first prenatal visit.
- Examination to assess for genital warts can be done during prenatal physical examination.

Note: *the HPV vaccine is not recommended in pregnancy. If the series is started prior to pregnancy, it should be discontinued for the duration of the pregnancy.*

TRICHOMONIASIS

- Currently no CDC guidelines for screening asymptomatic pregnant women.

HERPES SIMPLEX VIRUS

- Insufficient evidence to recommend routine Type Specific HSV-2 serology screening.
- Screen (HSV-2 Type Specific Serology) for HIV co-infected women.
- Consider HSV Type Specific Serology if sex partner with HSV infection and pregnant women has no history of HSV.
- Third trimester serial cultures for HSV are not recommended in asymptomatic women with a history of HSV.
- All pregnant women should be examined for evidence of genital herpes at the time of delivery.

Note: *California Department of Health Services STD Control Branch and CA STD Controllers Association Guidelines for the use of HSV-2 Serologic Tests state that universal screening in pregnancy should generally not be offered (see resource section for link to documents).*

TABLE 1: STD SCREENING RECOMMENDATIONS IN PREGNANCY AND TIME OF SCREENING

Time of Screening	Tests for All Pregnant Women (unless specific risk group noted)
First Prenatal Visit	• HIV • Syphilis (RPR or VDRL). Always confirm a positive RPR or VDRL with treponemal test (TP-PA or FTA- ABS) • Chlamydia • Gonorrhea for women ages 25 years or younger or women at risk (history of gonorrhea in prior 2 years, more than one sex partner in past year, partner with other partners, commercial sex work and drug use) or women living in an area with high gonorrhea prevalence (certain geographic regions). African American women are also at higher risk for gonorrhea. • Hepatitis B surface antigen (HBsAg) • Hepatitis C if high risk (history of IDU, history of blood transfusion or organ transplantation before 1992) • Bacterial Vaginosis if history of preterm labor and delivery • Pap test if no Pap in prior year • Herpes (HSV-2 Type Specific Serology) for HIV co-infected women and consider HSV Type Specific Serology if sex partner with HSV infection and pregnant women has no history of HSV
28-32 Weeks	• Syphilis if women lives in area with excess syphilis morbidity
Third Trimester	• HIV if high risk (IDU, concurrent STDs, multiple partners or HIV + partner) • Chlamydia for women ages 25 years or younger or at risk (new or multiple partners) or if tested positive earlier in pregnancy • Gonorrhea if continued risk or if tested positive earlier in pregnancy
During Labor & Delivery	• HIV rapid testing if undocumented HIV status • Syphilis if women lives in area with excess syphilis morbidity • Stat RPR if no prior prenatal care • HBsAg on admission to delivery if no prior screening or if high risk women(multiple partners prior 6 months, concurrent STDs, recent or current IDUs or HBsAg-positive partner)

STD TREATMENT IN PREGNANCY

(See Table 2 for treatment regimens)

CHLAMYDIA

- Azithromycin or Amoxicillin are the two recommended regimens.
- Test of cure should be done 3-4 weeks after completing therapy.

GONORRHEA

- Ceftriaxone and Cefixime are the only recommended regimens. For patients with cephalosporin allergy, anaphylaxis-type (IgE-mediated) penicillin allergy or other contraindication, CDC recommends considering desensitization. However, in the vast majority of cases, this may not be feasible. Judicious use of azithromycin is a practical option if spectinomycin is not available or not indicated. If azithromcyin is used a test-of-cure is prudent because efficacy data are limited and there are concerns about emerging resistance.
- Spectinomycin is an alternative regimen however it has not been manufactured in the U.S. since January 2006 and future availability is uncertain.
- Co-treatment for chlamydia infection is indicated unless chlamydia infection is ruled out using sensitive NAAT technology.

PELVIC INFLAMMATORY DISEASE

- Parenteral therapy in an inpatient setting is necessary because of risk of preterm delivery and maternal morbidity.
- Clindamycin plus Gentamicin are the recommended regimen.

CERVICITIS

- Azithromycin is the drug of choice for presumptive treatment.
- If local prevalence of gonorrhea is greater than 5%, co-treat for gonorrhea infection.
- Co-treat for bacterial vaginosis and/or trichomoniaisis if infection detected.

TRICHOMONIASIS

- Metronidazole (pregnancy category B) is the only recommended regimen.
- Some experts defer treatment in asymptomatic women until after 37 weeks gestation.
- For suspected drug-resistant trichomoniasis, rule out reinfection, and see 2006 CDC Guidelines, Trichomonas Follow-up p. 53, for other treatment options. Evaluate for metronidazole-resistant T. vaginalis. For laboratory and clinical consultations, contact CDC at 770-488-4115, http://www.cdc.gov/std

BACTERIAL VAGINOSIS

- All pregnant women with symptomatic bacterial vaginosis should be treated.

- Treatment of asymptomatic pregnant women with bacterial vaginosis who are at high risk for preterm delivery (prior delivery of a premature infant) might reduce risk for premature outcomes.
- Metronidazole and clindamycin are the recommended regimens.
- Follow-up evaluation for treatment effectiveness should be considered one month after therapy is completed in women at high risk for preterm delivery.

HERPES - ANOGENITAL

- The safety of acyclovir in pregnancy has not been established however, available data do not show an increased risk of birth defects in women treated with acyclovir in the first trimester.
- Acyclovir is the recommended regimen for women with first clinical episodes or severe recurrent herpes and IV acyclovir should be used in severe infection.
- Symptomatic HSV identified late in pregnancy or at the time of delivery should be managed in consultation with an infectious disease specialist.
- Many experts recommend suppressive acyclovir treatment late in pregnancy for women with recurrent genital herpes as it reduces frequency of C-section by reducing recurrent outbreaks at term.

WARTS - ANOGENITAL

- Cryotherapy, TCA, BCA or surgical removal are recommended treatments in pregnancy.
- Cryotherapy can be used on vaginal, urethral meatus and anal mucosal warts.
- TCA or BCA can be used on vaginal, anal mucosal warts
- Surgical removal is another option for anal mucosal warts.
- Cervical warts should be managed by a specialist.

SYPHILIS

- Benzathine penicillin G (generic name) is the recommended treatment for syphilis not involving the central nervous system and is available in only one long-acting formulation, Bicillin® L-A (the trade name) which contains only benzathine penicillin G. Other combination products, such as Bicillin® C-R, contain both long- and short-acting penicillins and are not effective for treating syphilis.
- Pregnant women allergic to penicillin should be treated with penicillin after desensitization.
- Some specialists recommend a second dose of benzathine penicillin G 2.4 million units IM 1 week after initial dose for pregnant women with primary, secondary or early latent syphilis.
- Some specialists recommend 2.4 million units of benzathine penicillin G q week for 1 to 3 weeks after completion of neurosyphilis treatment.

TABLE 2: STD TREATMENT REGIMENS FOR PREGNANT WOMEN

Disease	Regimens
Chlamydia	**Recommended** • Azithromycin 1 g po once or • Amoxicillin 500 mg po tid x 7d **Alternative** • Erythromycin base 500 mg po tid x 7d or • Erythromycin base 250 mg po qid x 14 d or • Erythromycin ethlysuccinate 800 mg po qid x 7 d or • Erythromycin ethlysuccinate 400 mg po qid x 14 d
Gonorrhea	**Recommended** • Ceftriaxone 125 mg IM once or • Cefixime 400 mg po once **Alternative** • Cefpodoxime 400 mg po or • Spectinomycin 2 g IM or • Azithromycin 2 g po in a single dose
Pelvic Inflammatory Disease	**Recommended** • Clindamycin 900 mg IV q 8 hrs **Plus** • Gentamicin 2mg/kg IM or IV followed by 1.5 mg/kg IM or IV q 8 hrs • Discontinue 24 hours after patient improves clinically and continue with oral clindamycin 450 mg qid for a total of 14 days.
Cervicitis	**Recommended** • Azithromycin 1 g po once **Plus** • Metronidazole if BV is present 100 mg po bid x 7 d
Trhichomonaisis	**Recommended** • Metronidazole 2 g po once
Bacterial Vaginosis	**Recommended** • Metronidazole 500 mg po bid x 7d or • Metronidazole250 mg po tid x 7d or • Clindamycin300 mg po bid x 7d

Chancroid	**Recommended** • Azithromycin 1 g po once or • Ceftriaxone 250 mg IM once or • Erythromycin base 500 mg po tid x 7 d
Lympogranuloma Venereum	**Recommended** • Eythromycin base 500 mg po qid x 3 wks or • Azithromycin 1 g po once per week x 3 wks
Warts - Anogenital External Genital/ Perianal Warts OR Mucosal Genital Warts	**Recommended** • Cryotherapy Apply once q 1-2 wks or • Tricholoacetic acid (TCA). Apply once q 1-2 wks or • Bichloroacetic acid (BCA) 80%-90%. Apply once q 1-2 wks or • Surgical removal
Herpes - Anogenital First Clinical Episode Episodic Therapy for Recurrent Episode Suppressive Therapy	**Recommended** • Acyclovir 400 mg po tid x 7-10 d or • Acyclovir 200 mg po 5/day x 7-10 d • Acyclovir 400 mg po tid x 5 d or • Acyclovir 800 mg po bid x 5 d or • Acyclovir 800 mg po tid x 2 d • Acyclovir 400 mg po bid
Syphilis Primary, Secondary, and Early Latent Late Latent, and Unknown duration	**Recommended** • Benzathine penicillin G 2.4 million units IM • Benzathine penicillin G 7.2 million units, administered as 3 doses of 2.4 million units IM, at 1-wk intervals
Neurosyphilis	**Recommended** • Aqueous crystalline penicillin G18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d **Alternative** • Procaine penicillin G, 2.4 million units IM q d x 10-14 d **Plus** • Probenicid 500 mg po qid x 10-14 d

STD RESOURCES

- The California Department of Public Health, STD Control Branch website (http://www.std.ca.gov) has many STD resources including clinical guidelines, treatment guidelines, surveillance reports and links to local STD data.
- The California STD/HIV Prevention Training Center (CA PTC) website[http://www.stdhivtraining.org/] has a variety of STD resources including information about STD/HIV prevention training courses, resources to assist providers in risk assessment, diagnosis and management of STDs as well as STD fact sheets for patients.
- Centers for Disease Control and Prevention 2006 STD Treatment Guidelines (http://www.cdc.gov/std/treatment)